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Respectfully Submitted,



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(12) United States Patent
Yamazaki et al.**(10) Patent No.: US 7,301,276 B2**
(45) Date of Patent: Nov. 27, 2007**(54) LIGHT EMITTING APPARATUS AND METHOD OF MANUFACTURING THE SAME****(75) Inventors:** Shunpei Yamazaki, Tokyo (JP);
Takeshi Fukunaga, Kanagawa (JP)**(73) Assignee:** Semiconductor Energy Laboratory
Co., Ltd. (JP)**(*) Notice:** Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 0 days.**(21) Appl. No.:** 09/815,563**(22) Filed:** Mar. 23, 2001**(65) Prior Publication Data**
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313/498
(58) Field of Classification Search 313/483,
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257/10, 100, 91, 99, 98

See application file for complete search history.

(56) References Cited**U.S. PATENT DOCUMENTS**4,137,481 A * 1/1979 Hilsum et al. 313/503
4,786,358 A * 11/1988 Yamazaki et al. 156/643
5,163,220 A * 11/1992 Zeto et al. 29/846
5,227,252 A * 7/1993 Murayama et al. 428/690
5,399,936 A * 3/1995 Namiki et al. 313/504
5,400,047 A * 3/1995 Beesly et al. 313/503
5,643,826 A * 7/1997 Ohtani et al. 437/88
5,652,067 A * 7/1997 Ito et al. 313/5025,661,500 A * 8/1997 Shinoda et al. 313/485
5,923,962 A * 7/1999 Ohtani et al. 438/150
5,932,327 A * 8/1999 Inoguchi et al. 257/102
5,962,970 A * 10/1999 Yokoi et al. 313/506
6,008,588 A * 12/1999 Fujii 313/498
6,037,712 A * 3/2000 Codama et al. 313/292
6,087,770 A * 7/2000 Kaneko et al. 313/510

(Continued)

FOREIGN PATENT DOCUMENTS

JP 7-130652 5/1995

OTHER PUBLICATIONSTsutsui, T. et al, "Electroluminescence in Organic Thin Films,"
Photochemical Processes in Organized Molecular Systems, pp.
437-450, 1991.

(Continued)

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Manzo, Cummings & Mehler, Ltd.**(57) ABSTRACT**

A light emitting apparatus with high homogeneity in image quality is provided, which includes anodes 102 on an insulator 101, cathodes 107 orthogonal to the anodes 102, and EL layers 106 interposed between the anodes 102 and the cathodes 107, and auxiliary wirings 103 are electrically connected to the anodes 102. The auxiliary wirings 103 are made of a material lower in resistance than that of the anodes 102, thereby being capable of reducing the wiring resistance of the anodes 102.

21 Claims, 12 Drawing Sheets